

**Mapleton Public Schools** is dedicated to providing the best possible learning environment for its

students and teachers. So when Rebuild Colorado approached the school district with a way to make its buildings more energy efficient and let the resulting energy savings pay for the improvements, district officials saw an opportunity to get better buildings within their existing budget.

The Mapleton Public Schools, located north of Denver in Adams County, serves 5,600 students. The district was interested in replacing aging, inefficient equipment throughout its buildings. In addition, the district was facing a comfort problem. Several elementary schools had been upgraded with air conditioning in half the classrooms in a previous project, but this left half the students and teachers in the same buildings in hot, uncomfortable rooms. The district was able to structure an energy performance contract to replace the aging equipment, add new cooling systems, and complete an asbestos abatement project, directing some future annual capital budget to the project as well as the energy savings.

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# Better buildings for Mapleton Schools

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## Project Description:

Through the energy performance contract, Mapleton Public Schools was able to upgrade nearly every school in the district in a single year, for a total investment in the schools of **\$4.7 million**.

An energy audit by the energy service company (ESCO) showed that the district had several energy-saving projects that would pay for themselves over time from the savings generated, including repairing and upgrading **controls**, and upgrading the **lighting systems** throughout the district.

The ESCO also identified cost-effective **water conservation** measures including replacing all the toilets, urinals and aerators in the district, and installing time-clocks and making other improvements to increase the irrigation efficiency.

**“The teachers gave us a standing ovation about the new lighting and air conditioning.”**  
- Charlotte Scarpella, Superintendent



*Air conditioning was added to Clayton Elementary School (above) and four other elementary schools as part of the project. But even with the addition of cooling, the district's utility bills have dropped dramatically as a result of the district-wide performance contract renovations.*

In addition to wanting improved efficiency, the district had other pressing concerns in the buildings. The district and ESCO worked together to expand the scope of the project to include **asbestos abatement**, additional **air conditioning**, **power for additional computers** and zoning of hydronic heating systems. These additional projects were financed in part by an annual contribution from the district of \$265,000.

How did this small district succeed with performance contracting? “We were all new to performance contracting and this unique financing approach. Rebuild Colorado introduced us to the concept of performance contracting and advised us throughout the process,” said **Don Herman**, chief financial officer for the district.

“They provided a survey of energy-saving opportunities, so when the ESCO came into the district we already had good information to go on. **Rebuild Colorado** was an extremely valuable resource for us”



# An Energy Performance Contracting Success Story

## PROJECT DETAILS

**Facility:** Mapleton Public Schools, Adams County #1

**Facility Type:** Public elementary, middle and high schools

**Facility Size:** 11 schools plus administration complex, 650,000 square feet total

**Type of Agreement:** Energy performance contract with guaranteed savings, financed through municipal lease-purchase agreement, with annual contribution from district

**Project Cost:** \$4.7 million total, including \$386,000 asbestos abatement and \$1.8 million energy and water efficiency improvements

**Energy and Water Cost Savings:** \$141,000 per year guaranteed, plus \$37,000 annual maintenance savings

**Contract Term:** 15 years; work completed Fall 2001

### Energy & Water Efficient Features:

- Replaced aging mechanical equipment
- Upgraded to high efficiency lighting
- Retrofitted inefficient toilets and aerators
- Improved irrigation systems
- Repaired pneumatic controls
- Upgraded computer control system at Skyview High
- Provided energy efficiency training

### Additional Projects Included:

- Additional air conditioning in four elementary schools
- Asbestos abatement
- Power installation for additional computers
- Repair existing unit ventilators
- Zoned hydronic heat

**“We really appreciate the brighter gym lights, after living with the dull ones for years.”**

**- Ed Fuseik, P.E. teacher**



*Metal halide lights replaced the dim fluorescent lights, improving the lighting and cutting the energy use.*



*The Instructional Service Center qualified for an Energy Star label. New lighting and room by room controls cut energy use, and provided preschool classrooms and offices with individual room control and better lighting.*

## Benefits/Results:

The ESCO coordinated closely with the district to ensure that the work did not disrupt the instructional areas. “Careful advance planning allowed the ESCO to get in and get the disruptive work done during the summer of 2001, before the students and teachers returned.” Though the efficiency projects could have paid for themselves alone, the district chose to add dollars and expand the project. The district appreciated the ESCO’s willingness to include other high-priority projects in the contract, including the addition of power for new computers and the coordination of the asbestos abatement work.

How have the systems performed? “In the first year, we saved \$80,000 more than we expected. This is remarkable because we have more students now and more air conditioning than before, but our utility bills still dropped by \$225,000,” said John Kreutzer, energy manager for the district. “In addition, we’re seeing much lower maintenance costs since the installation of the new ballasts and lamps, toilets and aerators, throughout the district.”

“I’m very pleased with the lighting and cooling in the rooms,” said principal and former teacher Laura Fischer. “We really like the light — so many old schools are dark. New teachers coming in from other districts also like it.”

“It’s more important now than ever to deliver a quality learning environment and save energy and water, and performance contracting provided us a way to make it happen,” said Don Herman.

For information, contact:

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